

PATENT  
0992-0128P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: KOBAYASHI, Kyoko et al.  
Int'l. Appl. No.: PCT/JP01/05623  
Appl. No.: New Group:  
Filed: February 28, 2002 Examiner:  
For: FOAMED LAMINATE BASED ON OLEFIN AND  
USE THEREOF

PRELIMINARY AMENDMENT

**BOX PATENT APPLICATION**

Assistant Commissioner for Patents  
Washington, DC 20231

February 28, 2002

Sir:

The following Preliminary Amendments and Remarks are respectfully submitted in connection with the above-identified application.

AMENDMENTS

IN THE SPECIFICATION:

Please amend the specification as follows:

Before line 1, insert --This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/JP01/05623 which has an International filing date of June 29, 2001, which designated the United States of America.--

IN THE CLAIMS:

Please amend the claims as follows:

11. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the ultrahigh molecular weight polyolefin resin (Y) comprises 15 - 40 parts by weight of an ultrahigh molecular weight polyolefin resin (y-1) having an intrinsic viscosity ( $\eta$ ) of 10 - 40 dl/g as determined in decalin at 135 °C and 85 - 60 parts by weight of a polyolefin resin (y-2) having an intrinsic viscosity ( $\eta$ ) of 0.1 -5 dl/g as determined in decalin at 135 °C, with the said constituents (y-1) and (y-2) summing up to 100 parts by weight.

12. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the ethylenic thermoplastic elastomer (A) comprises a polypropylene resin (a-3) in an amount of 30 parts by weight or less, per 100 parts by weight of total sum of the polyethylene/  $\alpha$  -olefin (a-2).

13. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the foaming expansion ratio of the foamed body ( $X_{F1}$ ) is at least twofold.

14. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the ethylenic thermoplastic elastomer (A)

consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/  $\alpha$  -olefin (a-2) or a mixture which contains further, on requirement, the polypropylene resin (a-3) to a dynamic heat treatment in the absence of cross-linking agent.

15. (Amended) The foamed laminate based on olefin as claimed in claim 5, wherein the olefinic thermoplastic elastomer (C) is one which is obtained by subjecting a mixture comprising the crystalline polyolefin resin (c-1) and the rubber (c-2) to a dynamic heat treatment in the presence of a cross-linking agent.

16. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the formed body ( $X_F$  1) is one which is obtained by subjecting a foamable ethylenic thermoplastic elastomer composition ( $X_1$ ) comprising the ethylenic thermoplastic elastomer (A) and the foaming agent (B) to foaming.

19. (Amended) The foamed laminate based on olefin as claimed in claim 4, wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 7120 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load).

27. (Amended) The formed laminate based on olefin, as claimed in claim 20, wherein the ultrahigh molecular weight polyolefin resin (Y) comprises 15 -40 parts by weight of an ultrahigh molecular weight polyolefin resin (y-1) having an intrinsic viscosity ( $\eta$ ) of 10 - 40 dl/g as determined in decalin at 135 °C and 85 - 60 parts by weight of a polyolefin resin (y-2) having an intrinsic viscosity ( $\eta$ ) of 0.1 - 5 dl/g as determined in decalin at 135 °C, with the said constituents (y-1) and (y-2) summing up to 100 parts by weight.

28. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the polyolefin resin (j-1) of the olefinic thermoplastic elastomer (J) is a Polypropylene resin.

29. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the olefinic thermoplastic elastomer (J) comprises further 10 - 200 parts by weight of a softening agent (j-3) per 100 parts by weight of the ethylene/  $\alpha$  -olefin copolymer rubber (j-2).

30. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the olefinic thermoplastic elastomer (J) is a thermoplastic elastomer composition obtained by subjecting a mixture comprising the polyolefin resin (j-1) and the ethylene/  $\alpha$  -olefin copolymer rubber (j-2) or a mixture which comprises further, optionally incorporated, the softening agent

(j-3) to a dynamic heat treatment in the presence of a cross-linking agent.

31. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the olefinic thermoplastic resin (K) is an isotactic polypropylene or a propylene/  $\alpha$  -olefin copolymer.

32. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the foamed body ( $X_{F2}$ ) is one which is obtained by foaming a foamable composition based on olefin ( $X_3$ ) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and the forming agent (B).

35. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the foaming expansion ratio of the foamed body ( $X_{F2}$ ) is at least twofold.

36. (Amended) The foamed laminate based on olefin, as claimed in claim 21, wherein the olefinic thermoplastic elastomer (C) is one which is obtained by subjecting a mixture comprising the crystalline polyolefin resin (c-1) and the rubber (c-2) to a dynamic heat treatment in the presence of a cross-linking agent.

37. (Amended) The foamed laminate based on olefin, as claimed in claim 20, wherein the olefinic thermoplastic elastomer composition (X<sub>2</sub>) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (230 °C, 10 kg load).

38. (Amended) A sliding element made of the foamed laminate based on olefin as claimed in claim 1.

39. (Amended) A weather strip for automobile made of the foamed laminate based on olefin as claimed in claim 1.

40. (Amended) A sealing material for architectural use made of the foamed laminate based on olefin as claimed in claim 1.

REMARKS

The specification has been amended to provide a cross-reference to the previously filed International Application.

The claims have been amended to remove improper multiple dependencies.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By Marc S. Weiner #36,623  
Marc S. Weiner, #32,181

MSW/rem  
0992-0128P

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

Attachment: VERSION WITH MARKINGS TO SHOW CHANGES MADE

(Rev. 02/21/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The specification has been amended to provide a cross-reference to the previously filed International Application.

IN THE CLAIMS:

The claims have been amended as follows:

11. (Amended) The foamed laminate based on olefin as claimed in claim 4 [5, 7, 8 or 10], wherein the ultrahigh molecular weight polyolefin resin (Y) comprises 15 - 40 parts by weight of an ultrahigh molecular weight polyolefin resin (y-1) having an intrinsic viscosity ( $\eta$ ) of 10 - 40 dl/g as determined in decalin at 135 °C and 85 - 60 parts by weight of a polyolefin resin (y-2) having an intrinsic viscosity ( $\eta$ ) of 0.1 -5 dl/g as determined in decalin at 135 °C, with the said constituents (y-1) and (y-2) summing up to 100 parts by weight.

12. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 4 to 11] claim 4, wherein the ethylenic thermoplastic elastomer (A) comprises a polypropylene resin (a-3) in an amount of 30 parts by weight or less, per 100 parts by weight of total sum of the polyethylene/  $\alpha$  -olefin (a-2).



13. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 4 to 12] claim 4, wherein the foaming expansion ratio of the foamed body ( $X_{F1}$ ) is at least twofold.

14. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 4 to 13] claim 4, wherein the ethylenic thermoplastic elastomer (A) consists of a thermoplastic elastomer obtained by subjecting a mixture of the polyethylene resin (a-1) and the copolymer based on ethylene/  $\alpha$  -olefin (a-2) or a mixture which contains further, on requirement, the polypropylene resin (a-3) to a dynamic heat treatment in the absence of cross-linking agent.

15. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 5 to 14] claim 5, wherein the olefinic thermoplastic elastomer (C) is one which is obtained by subjecting a mixture comprising the crystalline polyolefin resin (c-1) and the rubber (c-2) to a dynamic heat treatment in the presence of a cross-linking agent.

16. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 4 to 15] claim 4, wherein the formed body ( $X_{F1}$ ) is one which is obtained by subjecting a foamable ethylenic thermoplastic elastomer composition ( $X_1$ ) comprising the ethylenic thermoplastic elastomer (A) and the foaming agent (B) to foaming.

19. (Amended) The foamed laminate based on olefin as claimed in [any one of claims 4 to 18] claim 4, wherein the ethylenic thermoplastic elastomer (A) is one which has a compression set of 60 % or less as determined according to JIS K 7120 (at 70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (at 230 °C, 10 kg load).

27. (Amended) The formed laminate based on olefin, as claimed in claim 20 [21, 23, 24 or 26], wherein the ultrahigh molecular weight polyolefin resin (Y) comprises 15 -40 parts by weight of an ultrahigh molecular weight polyolefin resin (y-1) having an intrinsic viscosity ( $\eta$ ) of 10 - 40 dl/g as determined in decalin at 135 °C and 85 - 60 parts by weight of a polyolefin resin (y-2) having an intrinsic viscosity ( $\eta$ ) of 0.1 - 5 dl/g as determined in decalin at 135 °C, with the said constituents (y-1) and (y-2) summing up to 100 parts by weight.

28. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 27] claim 20, wherein the polyolefin resin (j-1) of the olefinic thermoplastic elastomer (J) is a Polypropylene resin.

29. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 28] claim 20, wherein the olefinic thermoplastic elastomer (J) comprises further 10 - 200

parts by weight of a softening agent (j-3) per 100 parts by weight of the ethylene/  $\alpha$  -olefin copolymer rubber (j-2).

30. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 29] claim 20, wherein the olefinic thermoplastic elastomer (J) is a thermoplastic elastomer composition obtained by subjecting a mixture comprising the polyolefin resin (j-1) and the ethylene/  $\alpha$  -olefin copolymer rubber (j-2) or a mixture which comprises further, optionally incorporated, the softening agent (j-3) to a dynamic heat treatment in the presence of a cross-linking agent.

31. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 30] claim 20, wherein the olefinic thermoplastic resin (K) is an isotactic polypropylene or a propylene/  $\alpha$  -olefin copolymer.

32. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 31] claim 20, wherein the foamed body ( $X_F$ ) is one which is obtained by foaming a foamable composition based on olefin ( $X_3$ ) comprising 100 parts by weight of the olefinic thermoplastic elastomer (J), 1 - 20 parts by weight of the olefinic thermoplastic resin (K) and the forming agent (B).

35. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 34] claim 20, wherein the foaming expansion ratio of the foamed body ( $X_F$ ) is at least twofold.

36. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 21 to 35] claim 21, wherein the olefinic thermoplastic elastomer (C) is one which is obtained by subjecting a mixture comprising the crystalline polyolefin resin (c-1) and the rubber (c-2) to a dynamic heat treatment in the presence of a cross-linking agent.

37. (Amended) The foamed laminate based on olefin, as claimed in [any one of claims 20 to 36] claim 20, wherein the olefinic thermoplastic elastomer composition ( $X_2$ ) is one which has a compression set of 60 % or less as determined according to JIS K 6262 (70 °C, 22 hours) and a melt flow rate of 0.1 g/10 min. or higher as determined according to JIS K 7120 (230 °C, 10 kg load).

38. (Amended) A sliding element made of the foamed laminate based on olefin as claimed in [any one of claims 1 to 37] claim 1.

39. (Amended) A weather strip for automobile made of the foamed laminate based on olefin as claimed in [any one of claims 1 to 37] claim 1.

40. (Amended) A sealing material for architectural use made of the foamed laminate based on olefin as claimed in [any one of claims 1 to 37] claim 1.